

~~chemically bound to inner walls of said hollow capillary to form a sol-gel extraction medium-loaded capillary; and~~

filling the capillary with a sol-gel extraction medium, wherein the sol-gel extraction medium is chemically bound to inner walls of the hollow capillary to form a sol-gel extraction medium-loaded capillary; and

exposing said the loaded capillary to a sample containing at least one target analyte, wherein said the target analyte becomes disposed inside said the loaded capillary.

2. (Previously presented) A method according to claim 1, wherein said exposing step comprises directing said sample through said coated capillary.

3. (Previously presented) A method according to claim 1, wherein said sol-gel extraction medium comprises a sol-gel coating.

4. (Previously presented) A method according to claim 1, wherein said sol-gel extraction medium comprises a porous sol gel monolithic bed.

5. (Previously presented) A method according to claim 1, wherein an organic component of said sol-gel is selected from the group consisting of sol-gel active forms and/or derivatives of poly(ethylene glycol), poly(methylphenylsiloxane), poly(dimethyldiphenylsiloxane), poly(dimethylsiloxane), poly(methylcyanopropylsiloxane), octadecylsilane, octylsilane, crown ethers, cyclodextrins, calixarenes, dendrimers, poly(styrene), poly(styrene-divinylbenzene), poly(acrylate), and molecularly imprinted polymers.

6. (Previously presented) A method according to claim 1, further including the step of desorbing said analyte from said sol-gel extraction medium to provide extracted analyte.

7. (Previously presented) A method according to claim 6, wherein said desorbing step comprises thermal desorbing.